CLAIMS:

1. Method of processing polychromatic attenuation values, wherein the polychromatic attenuation values are acquired by means of a polychromatic source of radiation generating a cone beam and radiation detector array with a plurality of detector rows, wherein the plurality of detector rows are arranged adjacent to each other in a first direction perpendicular to a second direction, wherein the second direction is parallel to the plurality of detector rows, the method comprising the step of:

assigning the monochromatic attenuation values to polychromatic attenuation values;

wherein the polychromatic attenuation values depend on the first direction.

2. Method of claim 1,

wherein a three-dimensional look-up table is used for assigning the monochromatic attenuation values to the polychromatic attenuation values; and

wherein the assignment of the monochromatic attenuation values to the polychromatic attenuation values which depend on the first direction is such that artifacts caused by a heel effect are at least partially suppressed.

3. The method of claim 1, wherein the look-up table is generated in accordance with the following steps:

determining a spectrum of the source of radiation;

determining mean energies of the spectrum;

determining first projection data by taking into account the polychromatic source of radiation, the detector array and a calibration object;

determining second projection data by taking into account a monochromatic source of radiation, the detector array and the calibration object;

generating a three-dimensional look-up table on the basis of the first and

second projection data;

wherein the three-dimensional look-up table comprises monochromatic attenuation values for all corresponding polychromatic attenuation values for each detector row of the plurality of detector rows.

4. Method of generating a look-up table for correcting polychromatic attenuation values acquired by means of a polychromatic source of radiation generating a cone beam and a radiation detector array with a plurality of detector rows, wherein the source of radiation has a spectrum, the method comprising the steps of:

determining mean energies of the spectrum;

determining first projection data by taking into account the polychromatic source of radiation, the detector array and a calibration object;

determining second projection data by taking into account a monochromatic source of radiation, the detector array and the calibration object;

generating a three-dimensional look-up table on the basis of the first and second projection data;

wherein the three-dimensional look-up table comprises monochromatic attenuation values for all corresponding polychromatic attenuation values for each detector row of the plurality of detector rows.

5. The Method of claim 4,

wherein the plurality of detector rows is arranged adjacent to each other in a first direction perpendicular to a second direction which is parallel to the plurality of detector rows;

wherein the monochromatic attenuation values depend on the first direction; and

wherein the correction is such that artifacts relating to one of a beam-hardening effect and a heel effect are at least partially suppressed.

6. Data processing device comprising:

a memory for storing polychromatic attenuation values; and

a data processor for processing the polychromatic attenuation values, wherein the data processor is adapted to perform the following operation:

loading the polychromatic attenuation values acquired by means of a polychromatic source of radiation generating a cone beam and radiation detector array with a plurality of detector rows, wherein the plurality of detector rows is arranged adjacent to each other in a first direction perpendicular to a second direction which is parallel to the plurality of detector rows;

assigning the polychromatic attenuation values to monochromatic attenuation values which depend on the first direction.

7. The data procession device of claim 6,

wherein the data processing device is part of a CT scanner system; and

wherein the assignment of the monochromatic attenuation values to the polychromatic attenuation values which depend on the first direction is such that artifacts caused by one of a beam-hardening and heel effect are at least partially suppressed.

8. Data processing device comprising:

a memory for storing polychromatic attenuation data; and

a data processor for generating a look-up table for correcting polychromatic attenuation values acquired by means of a polychromatic source of radiation generating a cone beam and radiation detector array with a plurality of detector rows, wherein the source of radiation has a spectrum and wherein the data processor is adapted to perform the following operation:

determining mean energies of the spectrum;

determining first projection data by taking into account the polychromatic source of radiation, the detector array and a calibration object;

determining second projection data by taking into account a monochromatic source of radiation, the detector array and the calibration object;

generating a three-dimensional look-up table on the basis of the first and second projection data;

wherein the three-dimensional look-up table comprises monochromatic attenuation values for all corresponding polychromatic attenuation values for each detector row of the plurality of detector rows.

9. The data processing device of claim 8,

wherein the data processing device is part of a CT scanner system; and

wherein the correction is such that artifacts relating to a heel effect are at least partially suppressed.

10. Computer program for processing polychromatic attenuation values, wherein the computer program causes a processor to perform the following operation when the computer program is executed on the processor:

loading the polychromatic attenuation values acquired by means of a polychromatic source of radiation generating a cone beam and radiation detector array with a plurality of detector rows, wherein the plurality of detector rows is arranged adjacent to each other in a first direction perpendicular to a second direction which is parallel to the detector rows; and

assigning the monochromatic attenuation values to polychromatic attenuation values which depend on the first direction.

11. Computer program for generating a look-up table for correcting polychromatic attenuation values acquired by means of a polychromatic source of radiation generating a cone beam and radiation detector array with a plurality of detector rows, wherein the source of radiation has a spectrum, wherein the computer program causes a processor to perform the following operation when the computer program is executed on the processor:

determining mean energies of the spectrum;

determining first projection data by taking into account the polychromatic source of radiation, the detector array and a calibration object;

determining second projection data by taking into account a monochromatic source of radiation, the detector array and the calibration object;

generating a three-dimensional look-up table on the basis of the first and

second projection data;

wherein the three-dimensional look-up table comprises monochromatic attenuation values for all corresponding polychromatic attenuation values for each detector row of the plurality of detector rows.